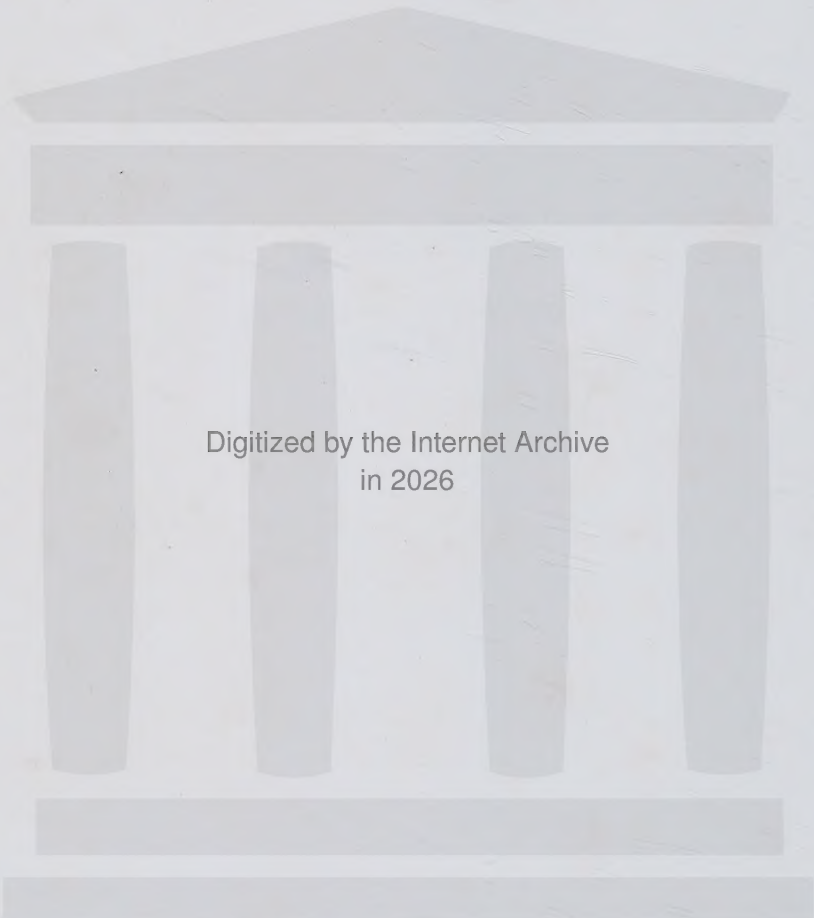
143

EXPERIMENTAL CELL RESEARCH

VOLUME 51 · 1968

PERIODICAL
UNIVERSITY OF HAWAII
LIBRARY.



Digitized by the Internet Archive
in 2026

https://archive.org/details/experimental-cell-research_1968_51_contents

EXPERIMENTAL CELL RESEARCH

Published under the auspices of

THE INTERNATIONAL SOCIETY FOR CELL BIOLOGY

EXECUTIVE EDITORS

T. CASPERSSON · T. GUSTAFSON · D. MAZIA

ASSOCIATE EDITOR

N. R. RINGERTZ

TECHNICAL EDITOR

VERA RUNNSTRÖM-REIO

EDITORIAL OFFICE

KAROLINSKA INSTITUTET, STOCKHOLM 60, SWEDEN

EDITORS

J. BRACHET · M. CHÈVREMONT · A. ENGSTRÖM

E. FAURÉ-FREMIET · G. FOLEY · G. KLEIN · O. LINDBERG · G. MONTALENTI

A. MOSCONA · J. PAUL · SIR JOHN RANDALL · J. RUNNSTRÖM

F. O. SCHMITT · C. H. WADDINGTON · R. W. G. WYCKOFF

VOLUME 51 · 1968

ACADEMIC PRESS, New York and London

COPYRIGHT, © 1968, BY ACADEMIC PRESS INC.

All Rights Reserved

No part of this book may be reproduced in any form, by photostat, microfilm, or any other means, without written permission from the publishers.

Printed in Sweden

Almqvist & Wiksells

BOKTRYCKERI AB

UPPSALA 1968

TABLE OF CONTENTS

NUMBER 1, JUNE 1968

SCHINDLER, R., ODARTCHENKO, N., GRIEDER, A. and RAMSEIER, L., Studies on the division cycle of mammalian cells. II. Causal relationship between completion of DNA synthesis and onset of the G2 period 1

FICQ, A., Métabolisme des RNAs pendant l'oogénèse. Effet des histones, de la polylysine et de l'actinomycine sur l'incorporation de l'uridine-^{3}H dans les oocytes isolés et les fragments d'ovaires d'*Asterias rubens* 12

BECKER, Y. and LEVITT, J., Stimulation of macromolecular processes in BSC_1 cells due to medium replenishment 27

YOUNG, L. G. and NELSON, L., Viscometric analysis of the contractile proteins of mammalian spermatozoa 34

GIGLI, I. and NELSON, jr, R. A., Complement dependent immune phagocytosis. I. Requirements for C'1, C'4, C'2, C'3 45

NÈVE, P., RODESCH, F. R. and DUMONT, J. E., Electron microscopy of isolated sheep thyroid cells 68

KEYSERLINGK, D. G., Elektronenmikroskopische Untersuchung über die Differenzierungsvorgänge im Cytoplasma von segmentierten neutrophilen Leukozyten während der Zellbewegung 79

BLOMGREN, H. and RÉVÉSZ, L., Cellular composition of mouse thymus after X-ray exposure . 92

SMETANA, K., UNUMA, T. and BUSCH, H., Ultrastructural studies on nucleic acids of nucleolar granular components in Novikoff hepatoma cells 105

THUNEBERG, L. and ROSTGAARD, J., Isolation of brush border fragments from homogenates of rat and rabbit kidney cortex 123

KEMPNER, E. S. and MILLER, J. H., The molecular biology of *Euglena gracilis*. IV. Cellular stratification by centrifuging 141

KEMPNER, E. S. and MILLER, J. H., The molecular biology of *Euglena gracilis*. V. Enzyme localization 150

MCLEISH, J., Chemical and autoradiographic studies of intranucleolar DNA in *Vicia faba* . . 157

VAN'T HOF, J., The action of IAA and kinetin on the mitotic cycle of proliferative and stationary phase excised root meristems 167

BRAHMACHARY, R. L., BANERJEE, K. P. and BASU, T. K., Investigations on transcription in *Limnæa* embryos 177

HOWELL, D. S. and CARLSON, L., Alterations in the composition of growth cartilage septa during calcification studied by microscopic X-ray elemental analysis 185

WILLIAMS, M. A. and CARR, I., Stimulation of mouse peritoneal cells by neutral glycerides. A study by light and electron microscope autoradiography using tritiated glycerides . . 196

LØVLIE, A. and BRÅTEN, T., On the division of cytoplasm and chloroplast in the multicellular green alga *Ulva mutabilis* Føyn 211

COHEN, W. D., Polyelectrolyte properties of the isolated mitotic apparatus 221

REHM, M., Effects of Ehrlich ascites tumor cells on the grouping behavior of dissociated normal cells 237

NUMBER 2–3, JULY–AUGUST 1968

HIRANO, H., SAITO, T. and OGAWA, K., Ultracytochemical study on the oxidoreductase activity in synapses in the rat cerebral cortex 259

HARRIS, C., REDDY, J. and SVOBODA, D., Isolation and ultrastructure of nucleoli altered *in vivo* 268

NILSSON, G. and PHILIPSON, L., Cell growth inhibition of human cell lines by human tissue extracts . . . 275
LLOYD, D. and GRIFFITHS, A. J., The isolation of mitochondria from the amoeba *Hartmanella castellanii* Neff . . . 291
MAWHINNEY, B. S., Some physical and chemical factors affecting the *in vitro* growth of embryonic rat bone . . . 301
PANJE, W. R. and KESSEL, R. G., Soluble proteins and quantitative analysis of protein and RNA during oogenesis in *Necturus maculosus* . . . 313
EASTMAN, R. C., Activities of several pentose shunt and glycolytic enzymes in developing eggs of the barnacle, *Pollicipes polymerus* . . . 323
BRINSTER, R., Carbon dioxide production from glucose by the preimplantation rabbit embryo 330
DOWER, G. E. and ZIEGLER, W. G., A balloon isolator for culture of heart cells without antibiotics . . . 335
NACHMIAS, V. T., Inhibition of streaming in amoeba by pinocytosis inducers. Possible mechanisms . . . 347
DREVIUS, L.-O., On the mechanism of sperm immobilization induced by normal sera and antisemen sera . . . 362
KINOSHITA, S., Relative deficiency of intracellular relaxing system observed in presumptive furrowing region in induced cleavage in the centrifuged sea urchin egg . . . 395
BELLEMARE, G., PINARD, J., AUBIN, A. and COUSINEAU, G. H., Uptake and incorporation of leucine and thymidine in developing sea urchin eggs. The effect of hexahomoserine . . 406
RANCOURT, M. W. and LITWACK, G., Electron microscopic observations of the early effects of cortisol on the liver cell of the adrenalectomized rat . . . 413
FLOYD, L. R., UNUMA, T. and BUSCH, H., Effects of aflatoxin B_1 and other carcinogens upon nucleolar RNA of various tissues in the rat . . . 423
ELSDALE, T. R., Parallel orientation of fibroblasts *in vitro* . . . 439
WHITFIELD, J. F. and PERRIS, A. D., The radiomimetic action of valinomycin on the nuclear structure of rat thymocytes . . . 451
MOUTSCHEN, J. and LACKS, S., Implications of pyrimidine nucleoside catabolism for cytological investigation of germinating seeds . . . 462
ISHIHARA, K., An analysis of acid polysaccharides produced at fertilization of sea urchin . . . 473
HOFFMAN, H. and MCDOUGALL, J., Some biological properties of proteins of the mouse submaxillary gland as revealed by growth of tissues on electrophoretic acrylamide gels . . 485
FOX, A. L., jr and TASWELL, H. F., Isozymes of alkaline phosphatase. A report on an autoradiographic method of demonstration . . . 504
BRACHET, J., HULIN, N. and GUERMANT, J., Acid lability of deoxyribonucleic acids and cell differentiation . . . 509
ROBERTS, R. M. and BUTT, V. S., Patterns of incorporation of pentose and uronic acid into the cell walls of maize root-tips . . . 519
MONNERON, A. and MOULÉ, Y., Étude ultrastructurale de particules ribonucléoprotéiques nucléaires isolées à partir du foie de rat . . . 531
MORRIS, N. R. and CRAMER, J. W., 5-Iodo-2′-deoxyuridine and DNA synthesis in mammalian cells . . . 555
SHIMADA, Y., Suppression of omygenesis by heterotypic and heterospecific cells in monolayer cultures . . . 564
GITTLESON, S. M. and JAHN, T. L., Vertical aggregations of *Polytomella agilis* . . . 579
BULGER, R. E. and TRUMP, B. F., Occurrence of repeating septate subunits between apposed cellular membranes . . . 587
AULA, P. and NICHOLS, W. W., Lysosomes and virus induced chromosome breakage . . . 595
MARSLAND, D. and HECHT, R., Cell division: combined anti-mitotic effects of colchicine and heavy water on first cleavage in the eggs of *Arbacia punctulata* . . . 602
WEISS, L., Studies on cellular adhesion in tissue culture. IX. Electrophoretic mobility and contact phenomena . . . 609
DICK, C. and JOHNS, E. W., The effect of two acetic acid containing fixatives on the histone content of calf thymus deoxyribonucleoprotein and calf thymus tissue . . . 626
GREGG, J. H., Prestalk cell isolated in *Dictyostelium* . . . 633